REMARKS

Claims 1-22 are currently pending in the present application, with Claims 1, 3, 5-10, 12, 14, 16-18, and 20 being amended, and new Claim 22 being added. Reconsideration and reexamination of the claims, as amended and as added, are respectfully requested.

The Examiner rejected Claims 1-21 under 35 U.S.C. § 103(a) as being unpatentable over Sato (JP-8-293039A) in view of Ohba (JP-3-216767A). This rejection is respectfully traversed with respect to the amended claims.

The present invention is directed to a method and apparatus for animating a video object whereby movable parts of an animated object move in accordance with music. Specifically, music control information is provided whereby the information includes multiple types of event data, such as MIDI data. The multiple types of event data may be selected by using a parameter setting module (such as the one illustrated in Fig. 7 of the present application) and designated to correspond with certain movable parts of the animated object. Music and video images are then generated whereby the video image is generated in response to the event data, and whereby the movement of the movable parts of the animated object is controlled in accordance with the selected and designated parameters.

Neither Sato nor Ohba contain any disclosure or suggestion of providing music control data containing multiple types of event data whereby different types of event data is selected and designated to correspond with different movable parts of an animated object, whereby the videos of the animated object is generated in response to a sequence of event data provided. Instead, Sato is directed to a musical image conversion device whereby the device detects volume, pitch, peaks and chords of a musical signal and generates a motion image based on the detected results. As the Examiner noted, Sato does not disclose determining movement of movable parts of an animated objects. Furthermore, Sato simply does not suggest or discuss selecting and setting different types of event data to correspond with different movable parts of an animated object (as recited in the amended claims). Ohba fails to make up for the deficiencies of Sato. Specifically, Ohba is directed to an image production device whereby intervals, rhythm, and length of musical

tones generated according to musical signals are detected, and whereby synthesis parameters are generated for changing the shape of an image according to the detected results. No mention is made of selecting and setting event data to correspond with movable parts of an animated object, or generating video images in accordance with such setting. Accordingly, Applicants respectfully submit that amended Claims 1-21 are not anticipated by, nor obvious in view of, Sato or Ohba, either alone or in combination.

New Claim 22 has been added to further claim the details of the present invention, and is respectfully submitted as patentable over the cited prior art references.

In view of the foregoing, Applicants respectfully submit that all of the pending claims of the present application are in condition for allowance. Reexamination and reconsideration of the amended claims, and examination of new Claim 22, are respectfully requested. If the Examiner believes it would further advance the prosecution of the present application, he is respectfully requested to contact the undersigned attorney.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 39303.20052.00.

Respectfully submitted,

Dated: September 23, 2002   By:

David T. Yang
Registration No. 44,415

Morrison & Foerster LLP
555 West Fifth Street
Suite 3500
Los Angeles, California 90013-1024
Telephone: (213) 892-85587
Facsimile: (213) 892-5454

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1, 3, 5-10, 12, 14, 16-18, and 20 have been amended in the following manner:

1.   (Twice amended)   A system for animating movable parts of an object along with music, said system comprising:

a sequencer module that sequentially provides music control information [and a synchronization signal] in correspondence with the music to be played, the music control information containing a plurality of types of event data associated to the music to be played;

a parameter setting module operable to select and set the types of event data to the [motion parameters effective to determine movements of] movable parts of the object such that the respective movable parts correspond to the types of event data selected and set by the parameter setting module;

an audio module for generating a sound in accordance with the music control information to thereby play the music; and

a video module responsive to [the synchronization signal for] the music control information for controlling movements of the respective movable parts in correspondence to the types of event data contained in the music control information sequentially provided from the sequencer module, thereby generating a motion image of the object in matching with progression of the music[, the video module utilizing the motion parameters to basically control the motion image and utilizing the music control information to further control the motion image in association with the played music].

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3.   (Amended)   The system as claimed in claim 1, wherein the video module successively generates key frames of the motion image in response to [the synchronization signal according to the motion parameters and] the music control information, the video module further generating a number of sub frames inserted between the successive key frames by interpolation to smoothen the motion image while varying the number of the sub frames dependently on a resource of the system affordable to the interpolation.

5.   (Amended)   The system as claimed in claim 1, wherein the parameter setting module sets motion parameters effective to determine the movements of the movable parts of the object, and the video module generates the motion image according to the motion parameters [effective to determine the movements of the movable parts of the object with respect to default positions of the movable parts], the video module periodically resetting the motion image to revert the movable parts to the default positions in matching with the progression of the music.

6.   (Amended)   The system as claimed in claim 1, wherein the video module is responsive to the synchronization signal, which is provided from the sequencer module and which is utilized to regulate a beat of the music so that the motion image of the object is controlled in synchronization with the beat of the music.

7.   (Amended)   The system as claimed in claim 1, wherein the sequencer module provides the music control information containing [a message] event data specifying an instrument used to play the music, and wherein the video module generate the motion image of an object representing a player with the specified instrument to play the music.

8   (Amended)   The system as claimed in claim 1, wherein <u>the parameter setting</u> <u>module sets motion parameters effective to determine the movements of the movable parts of the</u> <u>object, and</u> the video module utilizes the motion parameters to control the motion image of the object such that the movement of each part of the object is determined by the motion parameter, and utilizes the music control information controlling an amplitude of the sound to further control the motion image such that the movement of each <u>movable</u> part determined by the motion parameter is scaled in association with the amplitude of the sound.

9.   (Amended)   The system as claimed in claim 1, wherein the parameter setting module sets motion parameters effective to determine a posture of a dancer object, and wherein the video module is responsive to the synchronization signal <u>provided from the sequencer</u> <u>module</u> for generating the motion image of the dancer object according to the motion parameters such that the dancer object is controlled as if dancing in matching with progression of the music.

10.   (Twice amended)   An apparatus for animating movable parts of an object along with music, said apparatus comprising:

sequencer means for sequentially providing performance data of the music [and a timing signal regulating progression of the music] , the performance data containing a plurality of types of event data associated to the music to be played;

setting means operable for selecting and setting [motion parameters to design a movement of the object] the types of event data to the movable parts of the object such that the respective movable parts correspond to the types of event data selected and set by the setting means;

audio means for generating a sound in accordance with the performance data to thereby perform the music; and

video means responsive to [the timing signal for] the performance data for controlling movements of the respective movable parts in correspondence to the types of event data contained in the performance data sequentially provided from the sequencer means, thereby generating a motion image of the object in matching with the progression of the music[, the video means utilizing the motion parameters to form a framework of the motion image and further utilizing the performance data to modify the framework in association with the performance music].

12.   (Amended)   The apparatus as claimed in claim 10, wherein the video means comprises means for successively generating key frames of the motion image in response to [the timing signal according to the motion parameters and] the performance data, and means for generating a number of sub frames inserted between the successive key frames by interpolation to smoothen the motion image while varying the number of the sub frames dependently on a resource of the apparatus affordable to the interpolation.

14. (Twice amended) A method of animating <u>movable parts of</u> an object in association with music, said method comprising the step of:

sequentially providing performance data to perform the music [and a timing signal to regulate progression of the music]<u>, the performance data containing a plurality of types of event data associated to the music to be played</u>;

[provisionally providing motion parameters to design a movement of the object;]

<u>selecting and setting the types of event data to the movable parts of the object such that the respective movable parts correspond to the types of event data selected and set</u>;

generating a sound in accordance with the performance data to thereby perform the music; and

generating a motion image of the object in [response to the timing signal to match] <u>matching</u> with the progression of the music, wherein the step of generating a motion image <u>is in response to the performance data for controlling movements of the respective movable parts in correspondence to the types of event data contained in the performance data sequentially provided by said step of sequentially providing performance data</u> [comprises utilizing the motion parameters to form a framework of the motion image, and utilizing the performance data to modify the framework in association with the performed music].

16. (Amended) The method as claimed in claim 14, wherein the step of generating a motion image comprises successively generating key frames of the motion image in response to [the timing signal according to the motion parameters and] the performance data, and generating a variable number of sub frames inserted between the successive key frames by interpolation to smoothen the motion image.

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17.   (Amended)   The method as claimed in claim 14, wherein the step of [provisionally providing motion parameters] <u>selecting and setting the types of event data further</u> comprises providing [the] motion parameters to design a movement of the object representing a player of an instrument, and wherein the step of generating a motion image <u>further</u> comprises utilizing the motion parameters to form the framework of the motion image of the player and utilizing the performance data to modify the framework for generating the motion image presenting the player playing the instrument to perform the music.

18.   (Twice amended)   A machine readable medium for use in a computer having a CPU, said medium containing program instructions executable by the CPU for causing the computer system to perform a method for animating movable parts of an object along with music, said method comprising the steps of:

operating a sequencer module that sequentially provides music control information [and a synchronization signal] in correspondence with the music to be played, the music control information containing a plurality of types of event data associated to the music to be played;

operating a parameter setting module to select and set the types of event data to the [motion parameters effective to determine movements of] movable parts of the object such that the respective movable parts correspond to the types of event data selected and set by the parameter setting module;

operating an audio module to generate a sound in accordance with the music control information to thereby play the music; and

operating a video module in response to [the synchronization signal to generate] the music control information for controlling movements of the respective movable parts in correspondence to the types of event data contained in the music control information sequentially provided from the sequencer module, thereby generating a motion image of the object in matching with progression of the music[, the video module utilizing the motion parameters to control the motion image and utilizing the music control information to further control the motion image in association with the played music].

20.   (Amended)   The machine readable medium as claimed in claim 18, wherein the video module is operated to successively generate key frames of the motion image in response to [the synchronization signal according to the motion parameters and] the music control information, the video module further being operated to generate a number of sub frames inserted between the successive key frames by interpolation to smoothen the motion image while varying the number of the sub frames dependently on a resource of the computer system affordable to the video module.